National Institute of Environmental Health Sciences

Does antiviral therapy have a role in the control of Japanese encephalitis?

Author(s): Gould EA, Solomon T, Mackenzie JS
Year: 2008
Journal: Antiviral Research. 78 (1): 140-149

Abstract:

Approximately 2 billion people live in countries where Japanese encephalitis (JE) presents a significant risk to humans and animals, particularly in China and India, with at least 700 million potentially susceptible children. The combined effects of climate change, altered bird migratory patterns, increasing movement of humans, animals and goods, increasing deforestation and development of irrigation projects will inevitably lead to further geographic dispersal of the virus and an enhanced threat. Although most human infections are mild or asymptomatic, some 50% of patients who develop encephalitis suffer permanent neurologic defects, and 25% die. Vaccines have reduced the incidence of JE in some countries. No specific antiviral therapy is currently available. Interferon alpha-2a was tested in a double-blind placebo-controlled trial on children with Japanese encephalitis, but with negative results. There is thus a real need for antivirals that can reduce the toll of death and neurological sequelae resulting from infection with JE virus. Here we briefly review the epidemiological problems presented by this virus, the present state of drug development and the contributory role that antiviral therapy might play in developing future control strategies for JE.

Source: http://dx.doi.org/10.1016/j.antiviral.2007.10.005

Resource Description

Exposure : ☑

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Human Conflict/Displacement, Temperature

Temperature: Fluctuations

Geographic Feature: ☑

resource focuses on specific type of geography

None or Unspecified

Geographic Location: ☑

resource focuses on specific location

Global or Unspecified

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Vectorborne Disease

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: Viral Encephalitis

Intervention: ☑

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Resource Type: ☑

format or standard characteristic of resource

Review

Timescale: ☑

time period studied

Time Scale Unspecified